

FORM 51-102F3

Material Change Report

Item 1. Name and Address of Company

Planet Mining Exploration Inc. (the "Company")
302 – 750 West Pender Street
Vancouver, BC, V6C 2T7

Telephone: 604-681-0084

Item 2. Date of Material Change

News Release dated August 23, 2012

Item 3. News Release

News Release dated August 23, 2012 was disseminated via TheNewsWire and filed on SEDAR on August 23, 2012.

Item 4. Summary of Material Change

New Platinum - Palladium Discoveries at Golden Loon

Item 5. Full Description of Material Change

August 23, 2012 - Vancouver, B.C. Planet Mining Exploration Inc. ("Planet" or the "Company") (TSX-V: PXI) is pleased to announce the discovery of multiple occurrences of **platinum and palladium enrichment** encircling the large ultramafic intrusion that forms the core of the Golden loon property. The new platinum and palladium enriched zones differ from previously explored areas within the ultramafic in that they generally contain:

- Enriched platinum group metal (PGM) mineralization relative to the central intrusion with grab samples returning up to 1.75 g/t combined platinum and palladium.
- Anomalous to strong copper mineralization returning up to 3285 ppm (0.33%) copper.
- Coarse sulfides consisting of pyrite, pyrrhotite, pentlandite, chalcopyrite and rarely bornite.
- Mylonitic shear zones which may have facilitated secondary enrichment of PGMs and copper.

Samples are now being tested for **total platinum group metal enrichment**. **This will include testing for ruthenium, rhodium, osmium and iridium**, in addition to platinum and palladium. PGM's generally occur together within ultramafic intrusions and hence discovery of both platinum and palladium implies that these additional PGM's may also be present.

| Sample | Platinum (g/t) | Palladium (g/t) | Combined (g/t) | Copper (ppm) | Nickel (ppm) | Cobalt (ppm) | Gold (g/t) |
|---------|----------------|-----------------|----------------|--------------|--------------|--------------|------------|
| 1605582 | 1.19 | 0.56 | 1.75 | 11 | 2051 | 109 | 0.13 |
| 1605596 | 0.60 | 0.79 | 1.39 | 724 | 334 | 72 | - |
| 1605572 | 0.51 | 0.53 | 1.04 | 1304 | 173 | 106 | - |
| 1605594 | 0.20 | 0.28 | 0.48 | 241 | 510 | 109 | - |
| 1605590 | 0.14 | 0.20 | 0.34 | 1569 | 474 | 127 | 0.02 |
| 1605539 | 0.09 | 0.14 | 0.23 | 304 | 759 | 84 | 0.01 |
| 1604600 | 0.15 | - | 0.15 | - | 1317 | 130 | - |
| 1605521 | 0.14 | - | 0.14 | - | 2161 | 142 | 0.01 |
| 1605538 | 0.05 | 0.04 | 0.09 | 3285 | 883 | 92 | 0.01 |

Table 1: Highlighted bedrock and proximal float grab sample assay results from ongoing PGM exploration.

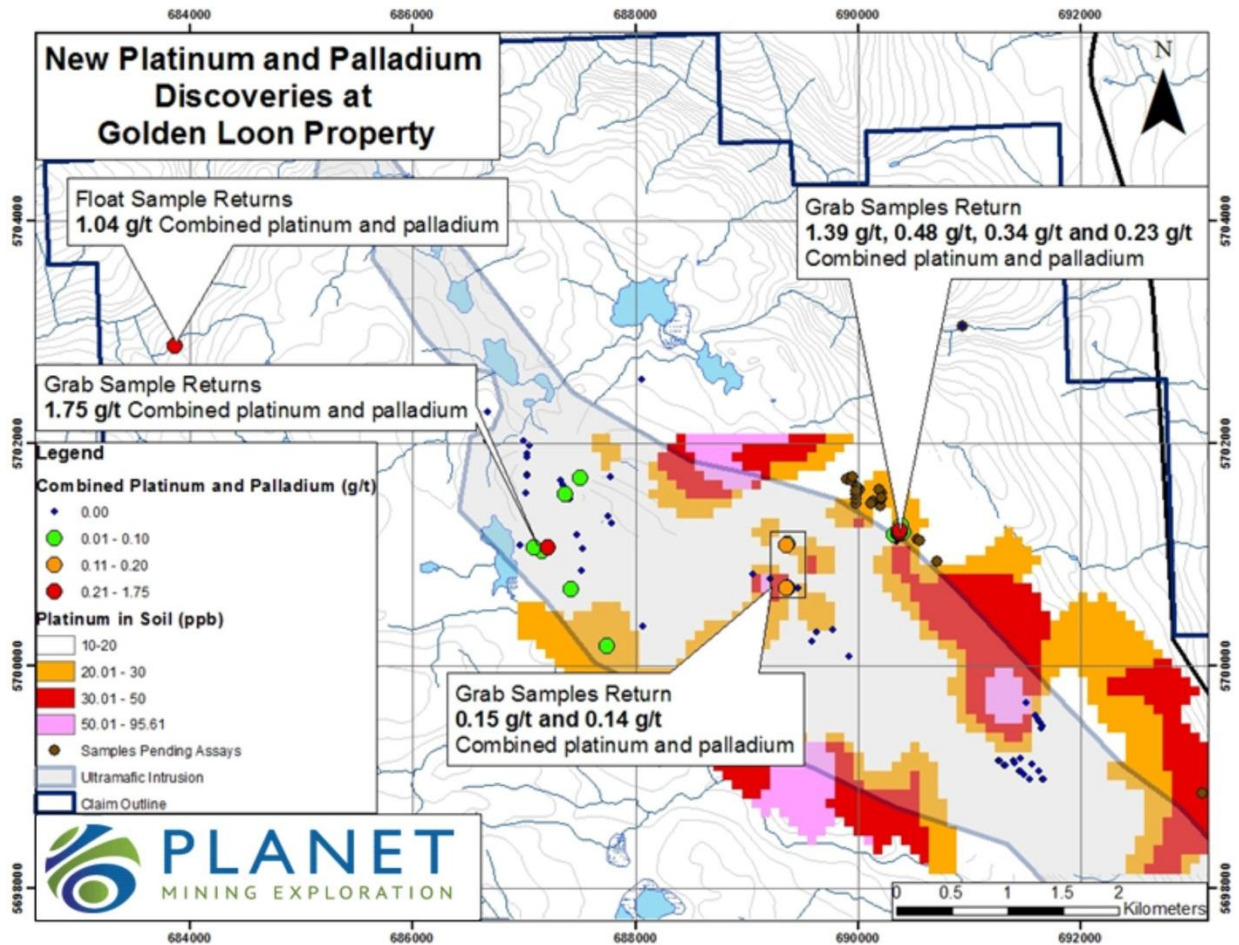


Figure 1: Map of grab sample results including highlighted values from recent exploration superimposed on platinum-in-soil results.

Platinum-in-soil results define an exploration target with more than 10 kilometres of aggregate strike distributed in a “horseshoe” pattern ringing the main ultramafic body. Early results from follow-up mapping include 1.2 kilometres strike of coarsely sulfide mineralized outcrop spatially related to a mylonitic shear zone along the eastern flank of the ultramafic. Grab samples from this area have returned up to 1.39 g/t combined platinum and palladium, with assays pending for the complete PGM profile, and for more than a dozen additional samples from this zone. **Early results suggest widespread 1+ g/t combined PGM potential within these zones of sulfide enrichment.**

Exploration of these new targets is ongoing, and will be a major focus of work as Planet continues to advance the Golden Loon project.

Maps including property location and infrastructure are posted to the Company's web site at www.planetexploration.net.

Mr. Chris Taylor, M.Sc, P.Geo, is President of Planet and is the Qualified Person as defined by National Instrument 43-101, who supervised the preparation of the above information.

For further information please contact Mr. Chris Taylor, M.Sc. P.Geo, President, or Mr. Robert Orr, Investor Relations at 604-681-0084.

Item 6. Reliance on subsection 7.1(2) or (3) of National Instrument 51-102

Not applicable

Item 7. Omitted Information

Not applicable

Item 8. Executive Officer

The following senior officer of the Issuer is knowledgeable about the material change and the Report and may be contacted:

Chris Taylor, President and Director Telephone: 604-681-0084.

Item 9. Date of Report

DATED at Vancouver, British Columbia, this 23rd day of August, 2012.